



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/893,590

06/29/2001

Janne Aaltonen

367.40294X00

5624

20457

7590

01/18/2005

ANTONELLI, TERRY, STOUT & KRAUS, LLP  
1300 NORTH SEVENTEENTH STREET  
SUITE 1800  
ARLINGTON, VA 22209-9889

EXAMINER

GESESSE, TILAHUN

ART UNIT

PAPER NUMBER

2684

DATE MAILED: 01/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/893,590

**Applicant(s)**

AALTONEN ET AL.

**Examiner**

Tilahun B Gesesse

**Art Unit**

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is in response to applicant's amendment and argument filed September 10/2004, in which claims 1 through 41 are pending.

#### ***Response to Arguments***

2. Applicant's arguments filed 9/10/04 have been fully considered but they are not persuasive.

On page 13, second paragraph of applicant's argument, Kostreski does not disclose or suggest the limitations:

"delivering content to a terminal, including a plurality of transmitters, the transmission characteristics of which define a network topology, or a network controller responsive to distribution of demand for specific content to determine an appropriate network topology by varying the transmission characteristics of at least one of the transmitters, or analyzing the content to be delivered together with its destination and varying the transmitter transmission characteristics accordingly, or determining a distribution of terminals receiving common content and varying a set of operational characteristics of a transmitter responsive to the distribution of terminals."

The examiner disagrees. Kostreski teaches the applicant's invention as set forth in the claim 1 as follows:

Kosterski discloses delivering content to a terminal (transmits broadcast contents to at least one customer premise system "terminal" (column 8, lines 12-22, column 9, lines 30-41 and figures 4- 5), further more, Kosterski teaches a plurality of

Art Unit: 2684

transmitters to overlapping portion of a desired service area, and subscriber within the service area will have a better reception of broadcast signals, (column 8, lines 23-33 and figures 4- 5). Kusterski also teaches the transmission characteristics of which defines a network topology (transmitting antenna TX1 transmits to the circle PA Protected Area or Primary area with circle radius 15 miles and acceptable reception up to 40 mile radius defined by circle MA indicating the Maximum Area (see column 11, lines 1-8 and figure 5). In one preferred embodiment of a simulcast "broadcasting the same information repeatedly" utilizing an original antenna TX1 in addition to antennas (TX2,TX3 and TX4) in a triangular configuration within or on the boundary of the protected area (PA) and TX1 antenna radiates at high power to maximum area (MA) (column 11, lines 18-34 and figure 5). Therefore, antenna TX1 transmission power defines service area coverage a maximum area up to 40 miles and terminal user within overlapping area has better reception because the user terminal receives signal form all transmitters. In addition toTX1 to the maximum area defines the topology the additional antennas also divides the MA in to sectors.

Kusterski teaches Clearly an additional need exists for a broadband broadcast system providing increased propagation coverage and reduced areas of blockages for broadcast video services and/or interactive service video signals. Any such system should also provide an increased number of programs, without requiring any additional spectrum.. The system should provide good signal quality throughout the entire reception area or service area. Accordingly, it is also

Art Unit: 2684

desired to minimize multi-path, interference and loss of service due to fading (column 5, lines 52-61).

To overcome such loss of service "program" Kosterski teaches The overlapping portions may extend throughout the intended reception area. Existing regulations relating to the relevant frequency allocations specify a primary and a secondary service area. Within the primary service area, the regulations protect the licensee from any interference on the relevant frequency channel. In initial implementations of the present invention complying with such regulations, the overlapping areas of propagation from the multiple transmitters would cover at least a major portion of the primary reception area and preferably also cover a substantial portion of the secondary reception area. Some portions of the secondary reception area may be covered by propagating waves from only one of the transmitters. All of the primary and secondary areas would be covered by propagating waves from at least one of the transmitters (column 10 lines 53-68).

Therefore, Kosterski, solve the problem of blockage or non line of sight broadcast, by overlapping plurality of transmitters at a concentrated area of coverage. In other word, Kosterski defines the topology of due to varying the transmission characteristics by varying from spread throughout maximum area to protected area as shown in figure 5.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1-41 are rejected under 35 U.S.C. 102(e) as being anticipated by Kostreski et al (6,130,898).

As to claims 1, Kostreski discloses a broadcast system for delivering content to a terminal (column 9, line 55-column 10 line 36 and figure 4), including a plurality of transmitters (TX1-TX3), the transmission characteristics of which defined a network topology (MA, sub cell of TX1-TX4 and overlapped area PA) and a network controller (5) responsive to distribution of demand of specific content to determine an appropriate network topology by varying the transmission characteristics of at least one of the transmitters (column 10 lines 9-36, column 11, lines 1-45, column 8, line 12-48 and figures 4-5). MA (Maximum Area) where the network maximum coverage to broadcast

programs whereas Protected Area (PA) is an area where densely populated such as downtown or hot spot regions, reception is high because a number of transmitters are covered. Hence, the network defines the topology of this region.

As to claim 2, Kostreski discloses signaling means providing information relating to the network topology for delivery to a terminal (column 9 line 54-column 10 line 45 and figure 4).

As to claims 3,21, Kostreski discloses the network controller (5) is operable to modify the topology to reduce the number of calls in an area to which the same content is being delivered (column 9,line 54-column 10, lines 20 and figure 4).

As to claim 4, 22, Kostreski discloses the network controller (5) is operable to modify the topology to increase the number of calls in an area to which the same content is being delivered (column 9,line 54-column 10, lines 20 and figure 4).

As to claim 5,24-26, Kostreski discloses transmitter-delivering content to an area overlying at least the network topology determined by the controller (figures 4 and 5).

As to claim 6,23, Kostreski discloses the network controller (5) is operable modify topology to deliver, in at least one cell , the content being delivered by the further transmitter (either using relay network or using overlap cells column 9, line 54-column 11, lines 45 and figures 4 and 5).

As to claim 7, 27-31, Kostreski discloses at least two transmitters comprise the plurality of transmitters (figure 4).

As to claim 8,32-36, Kostreski discloses the transmitters characteristics are varying in respect of one or more of the following, namely frequency, antenna directivity or transmission power (column 11, lines 1-34 and figure 5).

As to claim 9, kostreski discloses a method of delivering content to terminals over a network whose topology is defined by the transmission characteristics of a plurality of transmitters (column 10, lines 43-column 11, line 44 and figures 5A and 5B) , comprising analyzing the content to be delivered together with its destination and varying the transmission characteristics (column 7, lines 58-68,column 11 lines 1-45 and figures 5A and 5B). To explain, the primary area the radius of the 15 miles and secondary area 40 miles circle defined by the circle MA indicating the maximum area and overlap cells takes advantage of choosing strongest reception frequency, where receiver of signals is weak due to topology barrier. The two-way interactive signaling and delivering to provide interactive video service, should include receiver service area.

As to claims 10,38-40, kostreski discloses the transmitter characteristics are varied such that cellular density of the topology is reduced in an area where substantially the same content is being delivered to terminals (peak data usage, in business customers, occur in the daytime, but night time the business customers are be reduced and peak interactive video usage by residential customers occurs at night but daytime is reduce, (column 9, lines 65-67 and figure 4).

As to claim 11, Kostreski discloses the transmitter characteristics are varied such that cellular density of the topology is increased in an area where substantially the different content is being delivered to terminals (peak data usage, in business



Art Unit: 2684

customers, occur in the daytime, but night time the business customers are be reduced and peak interactive video usage by residential customers occurs at night but daytime is reduce, (column 9, lines 65-67 and figure 4).

As to claims 12-13, 19-20 and 41, Kostreski inherently discloses a computer program comprising executable code for execution when loaded on a computer, the computer is operable in accordance with the code to carry out the method according and computer readable medium .

As to claims 14-18, Kostreski discloses a broadcast system (figure 4) having a plurality of transmitters (Tx1-TX3) for delivering content to terminals in respective locations each transmitter operating in accordance with a set of operational characteristics (column 11, lines 1-45) comprising: means for determining a distribution (5) of terminals for delivery of common content and means for varying the operational characteristics of a transmitter respective to the determined distribution of terminals (column 11, lines 1-45 and figures 4 and 5).

As to claims 37, Kostreski discloses the transmitter characteristics are varied such that the cellular density of the topology is increased in an area where substantially different content is being delivered to terminals (peak data usage, typical by business customers, occur in the daytime, and peak interactive video usage by residential customers occurs at night, column 9 lines 65-67 and column 10, lines 9-20 and figure 4).

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rutledge et al (5,802,473) discloses a method of using the existing radio resources to automatically determine the current cellular topology is described (abstract).

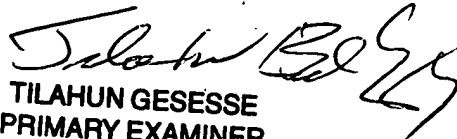
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 703-308-5873. The examiner can normally be reached on flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2684

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Tilahun Gesesse*  
Primary Examiner  
US Patent and Trademark Office  
Tel. 703-308-5873  
January 5, 2005

  
TILAHUN GESESSE  
PRIMARY EXAMINER